DRAFT

ODP #O-057

MEMORANDUM FOR: Deputy Director for National Foreign
                     Assessment
                    Deputy Director for Operations
                    Deputy Director for Science and Technology

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FROM: [   ]
                Deputy Director for Administration

SUBJECT: Study of Alternative Strategies for Message
                  Dissemination

    1.   The Information Handling Task Force has determined that one area of investigation requiring priority attention is the message dissemination function within the Headquarters complex. The definition of dissemination is the set of decision processes by which information is routed. It is a function that effects most of the existing and planned information systems. It is, therefore, requested that a representative of your component be designated to participate in a 90-day study to identify feasible alternatives for message dissemination and the associated policy issues.

    2.   The reason for current concern is the growth in automation of dissemination functions without a top-level understanding of possible alternatives and associated costs in dollars and personnel. While we have a significant investment in the Cable Dissemination System to provide centralized dissemination of messages to the Agency as a whole, there are significant efforts within the SAFE program and under the DORIC program to provide similar services on a directorate basis. If there is a need to pursue decentralized dissemination then it is important that the relative roles of OC and its customers be clarified to eliminate duplication of resources wherever possible. Conversely, if OC is able to fulfill the dissemination needs of the Agency, then eliminating areas of concern for service that are prompting decentralized developments should be addressed quickly.

    3.   Part of this study also has to address the role of the Cable Secretary in support of the DCI. The fundamental reason for the existence of the Secretariat is to protect the DCI's interest by alerting him to statements of National policy included in Agency messages and to make him aware of information contained in messages that is of significant

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interest and importance to him. After 30 years it seems
prudent to review the need for independent audit of electrical
messages. While the ultimate decision rests with the DCI,
he should have the advantage of our collective wisdom.

4. Lastly, with our emphasis on increasing the amount
of information originated, processed, and delivered electrically,
any study must be forward looking with regard to the associated
registry functions. In our efforts to make systems more
efficient and to speed delivery of electrical information,
there is a need to review the role of registries to assure
ourselves that only essential functions are being performed
and that these functions are modified to minimize delays in
movement of messages.

5. The Information Handling Task Force will provide
the Chairperson for this Study Group. The results will be
made available to the Executive Committee along with Task
Force recommendations for action.

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Attachments:
  A. DCI Memo, dated 21 July 1972
  B. Executive Director-Comptroller
     Memo, dated 13 June 1972

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cc:
     SA/DDCI, w/atts

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21 July 1972

MEMORANDUM FOR: Executive Director-Comptroller
Deputy Director for Intelligence
Deputy Director for Support

SUBJECT   : Automatic Dissemination

REFERENCE   : Memo for DCI from ExDir dtd 13 Jun 72,
Same Subject

1.   After a full review of this subject and consideration of the comments advanced by all concerned, I have concluded that the recommendations of the Executive Director-Comptroller should be approved, subject to the following:

a. The Executive Director-Comptroller will review the implementation of this decision on a monthly basis and call to my attention any developments which might suggest a review of this decision.

b. I have stressed the desirability of utilizing equipment currently in hand wherever this can be done without adverse effect on the development of the final system.

c. I particularly insist that the Office of Communications and the Central Reference Service, through the DD/S and DD/I respectively, collaborate to the maximum degree possible in the development of mutually interacting procedures for dissemination and indexing to minimize duplication and extra effort.

d. I recognize that the Executive Director's recommendation (h) may require considerable study, which should be a separate action from the remainder of this decision.

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2. I wish to make particular note of my high regard for the initiative and imagination displayed by the Central Reference Service in the development of this activity to date. The above decision in no way reflects upon this, and I am sure the Central Reference Service will continue to display the same initiative and imagination in its continuing responsibilities and in positive collaboration with the Office of Communications in the implementation of this decision. Similarly, I express my regard and appreciation for the work of the Office of Communications and expect from it sincere collaboration with the Central Reference Service in the implementation of this decision and in future programs where responsibilities interact.

Richard Helms
Director

Attachment:
Reference

13 JUN 1972

MEMORANDUM FOR THE DIRECTOR

SUBJECT: Automatic Dissemination

1. Some years ago the Office of Communications developed a phased Automated Communications Terminal (ACT) program for the automation of its Signal Center and the cable dissemination process. The phases were:

    a. ACT I - Automation of Signal Center Functions.

    b. ACT II - Machine-assisted dissemination of electrically received cables.

    c. ACT III - Automation of the cable printing and distribution process.

2. ACT I was approved, funded, and is in the final stages of implementation at this time. The implementation of ACT II was suspended in 1971 due to recommendations that a careful study of the Central Reference Service's Machine-Assisted Dissemination (MAD) system be made to determine whether it might be a better vehicle in the long-term interests of the Agency and involve a more economical expenditure. The merits and demerits of the two systems have been debated with increasing emotion since that time. In order to seek the best possible solution to what had become an impasse between the Office of Communications and the Central Reference Service, in January I directed a joint study and proposal for the automation of cable dissemination. A final report has been furnished to me which reflects continued disagreement between the proponents of the systems advocated by these two offices. I have reviewed the pros and cons in this debate in considerable detail and recommend to you the following:

    a. Dissemination must be an integral element of transmission of messages, since their substance is

frequently so time-critical as to preclude any possibility
of a gap between these functions. I thus recommend that
the Office of Communications be instructed to proceed
with the development of an automatic dissemination system.

    b. The present Office of Communications proposal
(ACT II) contemplates a totally self-sufficient system
with its own computer support. I believe the Office of
Communications should be directed to rely to the extent
feasible on the Automatic Data Processing equipment
currently in the Agency's possession or being acquired,
including that in the Central Reference Service. Any
recommendations relating to acquisition of new material
should be coordinated with the Office of Computer Services
and the Information Processing Board.

    c. The Office of Communications automatic cable
dissemination system should handle all traffic presently
received electrically by the Agency or which can in the
future be received electrically.

    d. The Office of Communications system should
plan for electrical distribution within the Agency to the
extent required for maximum service to customers within
budget availabilities.

    e. The Central Reference Service should be charged
with the development of index and retrieval systems for
all electrical and non-electrical traffic received by the
Agency or sent by the Agency, with the exception of
Clandestine Service operational material, counterintelligence
records, selected compartmented project material, and
certain DD/S&T data transmissions (such as telemetry and
ELINT analogs). Its procedure for doing so should be
automated to the extent feasible within budgetary limitations.

    f. The Central Reference Service will continue to
disseminate non-electrical material received or sent by
the Agency with the exception of the categories listed above.

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g. The Central Reference Service and the Office of Communications will establish a close working relationship between the dissemination and indexing activities and work toward the development of such techniques as are feasible by which the two functions will complement each other (common logs, subject indicators, and the like).

h. The Central Reference Service will work with the analysis and production offices within the Agency, and with such other Intelligence Community agencies as may be feasible, to develop the most effective mix of central bibliographic and document retrieval files and special purpose document retrieval files for individual customer offices, analysts, or other requestors.

i. The Office of Communications will prosecute with the appropriate offices the electrification of transmission and dissemination of [   ] reports within the Community, as well as the replacement of present hard copy NSA material by electrical messages.

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3. This action should call for expenditures in the neighborhood of $500,000 during Fiscal Year 1973 for contractual assistance, including software design. Equipment acquisition, if required, would be in addition. I am convinced that this expenditure will be well warranted in terms of improved efficiency in future years. Despite its apparent larger initial investment, I believe it preferable in the long term to the alternative of further development of the Central Reference Service MAD system.

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W. E. Colby
Executive Director-Comptroller

Resources continue to be tight while
technological opportunity grows. Under these
conditions wise investment can proceed only if the
goals we are trying to achieve are understood and
there is agreement on relative priorities.

Presented are a set of interlocking goals for
Information Handling. Goals are understood to be
ideals toward which we strive. There is no
guarantee that goals are achievable, but there is
the sense that the future will be better if we
work collectively toward common ends, even when
those ends are not completely achieved. Conflicts
between some of the goals are recognized.

Information Handling Goals:

1. Increase the productivity and efficiency of our people and
   components;

2. Improve the quality of the Agency's products;

3. Improve the timeliness of decisions and the responsiveness of
   our products;

4. Improve the security of our activities;

5. Extend the sense of Headquarters community to all Agency
   components in all locations, overseas and domestic;

6. Make information handling tools a natural, well-integrated
   part of the office work pattern;

7. Eliminate information handling activities of marginal value
   vis-a-vis their cost;

8. Reduce the life-cycle costs of existing and planned
   information systems;

services are directed to the most important intelligence and
administrative needs;

10. Improve the accessibility of data bases and their quality with
regard to consistency and completeness;

11. Shorten the coordination, approval, and release cycle of both
intelligence and administrative actions;

12. Provide better control over access to classified information ,
including provision of individual accountability;

13. Provide more secure storage for sensitive material;

14. Improve maintainability of information handling systems, both
existing and planned. The means must be found to stabilize the
cost of keeping production systems working effectively.

15. Shorten information system development time. Information
systems must take into account a rapidly changing technology
in meeting evolving needs. We cannot tolerate a 7-12 year
development cycle with the attendant risks of having unwanted
or outmoded systems when they go into operation.

16. Maintain a cadre of information handling professionals with
the requisite skills to meet the needs over the next decade.
Our focus must be on finding and keeping people who can reduce
the life-cycle information systems costs through goals 14 and
15.

17. Establish system management standards. We must codify our
collective experience in developing and operating systems into
an agreed upon and enforced set of management procedures.
This is vital to the attainment of goals 14, 15, and 16 above.

18. Communicate most information electrically between people,
wherever they may be. This includes Headquarters-field
communication, sending products to consumers, etc. This goal
is central to the achievement of several others: achieving a
sense of community (5), integrating information tools into
office work patterns (6), improving data base accessibility
(10), and shortening the coordination cycle (11). The
movement of information by means of paper is slow,
inefficient, and presents unique security risks. Still, paper
has singular virtues as a medium for the reader, so electrical
distribution implies the availability of conveniently
positioned printing and facsimile devices.

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19. Provide a single user terminal. The information user should have one and only one terminal at his/her desk.

20. Provide the means to capture keystrokes. Frequently, information is retyped, rekeyed, or "repoked" to make minor changes or to convert it to another format for distribution, reproduction, or filing. We must eliminate this tedious and error-prone activity.

21. Achieve a consistent and natural Agency-wide standard for access to information services. Access mechanisms should be tailored to the needs of the person, not to the peculiarities of the system. Consistency is needed to reduce training time and achieve other information handling goals (18, 19, and 20).

22. Store information more efficiently. Improved data base quality and access depend on inexpensive, fast file organization techniques. Both the technology and theory show that multiply-accessed, single-copy file storage can improve accuracy, consistency, and economy.

23. Aggregate information for managers and analysts. Most information systems are built for specialist users, with products tailored to needs which are known beforehand. Analysts and managers often do not, or cannot predict their information needs. In the absence of this apriori knowledge, they must resort to looking at much raw data. Better means must be found to meet their information needs with the available data by processing stored data into higher-level forms on an ad hoc basis.

24. Provide multilevel security access to data bases. Physical data compartmentation should be employed only where sensitivity and cost warrant. Considerable technological progress has been made toward achieving secure access to multilevel security files by users cleared at different levels. We must accelerate this effort. Multilevel security capabilities are essential to achieving better access control for those systems that are not single-level and compartmented.

25. Develop Cryptographic devices for user terminals and storage devices. The microelectronics revolution permits compact, inexpensive cryptographic devices that can be used not only for end-to-end secure electrical transmission (essential for goal 18), but also for additional information storage security (goal 13).

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26. Develop effective top-level coordination among managers of
components which provide information services. This is vital
if we are to proceed in step on several of the goals listed
here: establishing management standards (17), maintaining a
professional cadre (16), providing a universal terminal net
(19), developing a sense of community (5), and developing a
standard, natural means for user access to information
services (21).

27. Develop effective top-level coordination among managers of
componenets that use information services. Continuing
management attention from an Agency perspective is needed to
ferret out marginal activities (7) and to sort out priorities
(10). Without a mechanism to make hard decisions on
resources, we will not have the means to achieve the basic
goals for improving performance.

28. Establish the means to accelerate the integration of
communications and centralized information services,
particularly ADP services.

29. Agency systems should be developed with consideration for
community compatibility. As requirements for inter-Agency
connections arise, future systems should be capable of
efficient and cost-effective interconnection.

30. Develop overall investment and resource guidance for Agency
information handling. This is needed for two reasons.
Pursuit of some of the developmental goals involves large up-
front costs. For example, the general goal to reduce life-
cycle system costs (8) in some cases may require volume
equipment buys or initial investments in backbone
communication facilities with capacities that far exceed
initial needs. Secondly, many of the listed information
handling goals are in conflict because of their resource
implications: improving security vs. improving access to
information; reducing life-cycle system costs vs. improved
quality and timeliness of our product. Priority attention
must be given to resource guidance early in the planning
period, but the means must be found to adjust it continually
as conditions change. Resource decisions will require changes
to action programs directed to these goals; indeed, they may
produce major adjustments in the goals themselves.

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